ABSTRACT

A DBR grating may be created in the cladding of a wafer by defining a non-gain window area, advantageously at the end of the wafer. The non-gain area may be defined either by removing all layers above the cladding layer at the window portion or, preferably, by halting the MOCVD process once the cladding layer has been created and by selectively removing from a portion of the cladding layer a protective coating, advantageously of SiO_2, Si_3N_4, or a metal, to define the window area. A photo resist is applied, and the wafer is exposed to interfering laser beams to create a grating pattern in the photoresist, conveniently without the need for any particular effort to confine either the photoresist or the interfering beams solely to the window area. The photoresist is developed and an etchant used to transfer the pattern into the cladding layer. The protective layer is then removed and non-gain layers may be laid down in the usual manner, the protective layer having prevented the grating pattern from being created anywhere but in the window area.